

Douglas A. Ducey
Governor



Kevin Donnellan
Acting Director

ARIZONA DEPARTMENT OF ADMINISTRATION

OFFICE OF THE DIRECTOR

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June 15, 2015

The Honorable Diane Douglas
Superintendent of Public Instruction
Arizona Department of Education
1535 West Jefferson Street
Phoenix, AZ 85007

The Honorable Diane Douglas:

In response to the Project Investment Justification (PIJ) for the “**Early Childhood Education – Preschool Development Grant (ECE-PDG)**” project, my staff has reviewed your proposal to integrate preschool information into the Arizona Department of Education K-12 information systems to help educators understand and improve early childhood education programs.

The PIJ implied funding was available from a Federal Education Grant in the amount of \$2,203.2 thousand for the total five-year life cycle cost of the project of \$2,203.2 thousand.

This is notification of the Arizona Strategic Enterprise Technology Office's recommendation to the Information Technology Authorization Committee (ITAC) for **Approval with Conditions** of the technology project as follows:

1. Should there be any changes in the proposed costs, technology approach, scope of work, or implementation schedule, ADE must amend the PIJ to reflect the changes and submit it to ADOA-ASET and the Information Technology Authorization Committee (ITAC), if required for review and approval prior to further expenditure of funds.
2. ADE will continue to work with ADOA-ASET to ensure the appropriate security controls are in place to protect State data.

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The ITAC is scheduled to meet on June 24, 2015 to review this project.

Should the ITAC approve the project, you may then proceed to secure additional approvals as required from the Joint Legislative Budget Committee, the Office of Strategic Planning and Budgeting, and the State Procurement Office.

Best Wishes,



Michael J. Lettman
Acting State CIO and Chief Information Security Officer
Arizona Strategic Enterprise Technology (ASET) Office

ec

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ASET# ED15005

Analyst: Eddy Cheng

PIJ Summary - ASET

Project Number: ED15005

<i>Agency Name & Address</i>	<i>Contact Information</i>
Arizona Department of Education 1535 West Jefferson Street Phoenix, AZ 85007	Tom Watkins 602.542.7104 Tom.Watkins@azed.gov
<i>Project and Investment Justification Name</i>	<i>Date Submitted</i>
Early Childhood Education – Preschool Development Grant (ECE-PDG)	May 26, 2015

Project Overview

Problem Description

The State of Arizona's infrastructure in its Early Childhood Education (ECE) system is limited by an under-developed early childhood workforce and systems that do not support preschool programs in the highest need areas. Currently, Arizona's High Need Communities (HNC) preschool children information (data) is not integrated with the States' K-12 data. Integrating preschool data with K-12 data will significantly enhance the ability of administrators, educators and specialists to track progress of early childhood HNC students and recommend policies to improve future performance of these students.

Solution

The proposed technical solution will be a combination of new development and integration with existing applications to meet the business goals listed below:

- New development of an ECE web portal using a .Net front end. This will serve as the main landing page where the ECE users (internal as well as external) will access preschool data and reports to perform their work. This new .NET based portal will have some new capabilities which are specific to the business needs of ECE. All preschools are required to use the Teaching Strategies GOLD application in order to garner Federal and State funds. The new ECE .Net based portal does not replace Teaching Strategies GOLD used by preschool program but provides new dashboards for end users to use in viewing data from all HNC preschool children information.
- Extensions to the existing Microsoft Dynamics CRM platform will be leveraged to provide for profile management and change request based work flows. CRM will be leveraged for its business rules and data processing capabilities. The new .NET portal will act as the data presentation facade for end users.
- Existing Agency developed AZDash Reports will be modified to display student achievement related data. The new .NET based portal will call the exiting AZDash reports in a frame. This will help avoid duplication of the student data. It will also help deliver a uniform experience to end users when accessing various agency developed systems. Early childhood educators and staff members will be able to view an assortment of reports including classroom, district and statewide level reporting.

- Batch Load GOLD data into the ADE Agency ODS so ECE users will be able to view all preschool data in AZDash. These reports may include reports similar to existing GOLD Snapshot, Growth, OSEP and Comparative Reports.
- The Event Management System (EMS) will be used for managing and helping end users (both internal and external) view and register for any ECM related event. Access to the EMS will again be based on a frame being rendered from EMS in the new ECE portal.
- The Content Management System (CMS) will be used for managing and helping store and share all artifacts related to ECE initiatives. End users (both internal and external) will be able to view and download documents and other important files using the CMS. Access to the CMS will again be based on a frame being rendered from the EMS in the new ECE portal.
- ECE specific reports will be developed in the new .NET application using a combination of SQL Server Reporting Services (SSRS) and Hi-Charts reports.
- Information from external sources will be imported using a variety of methods depending on the capabilities of the external source (i.e. API, SSIS, and batch flat file loading). The new .NET application will subscribe to external web services to pull data from external sources. The new .NET application will also be used to develop simple to use Excel based imports into the new portal for data that is not exposed or available programmatically. The GOLD system will be integrated into the AzEDS global unique ID service.
- The new .NET portal will also have capability for ECE users to export data in Excel and PDF formats.
- Notification capabilities will be built into the portal leveraging CRM capabilities.
- The existing Agency ODS student domain will be extended to support requirements for handling preschool students. Relevant capabilities will be created in the new .NET application to facilitate sub-grantees access to the ODS via profile management functionality so they'll be able to view, upload and manage their information. In order to implement appropriate checks and balances for this information, we will leverage the CRM based change request workflow process.
- For Authorization and Authentication the new ECE Portal will integrate with ADEConnect. The project will commence load and scalability testing with the ADE Connect integration to ensure appropriate performance is maintained.

Major Deliverables and Outcomes

In order to meet the challenges of the business problem stated above, ADE I.T. will provide IT services, applications development, and systems integration to enable the following solution components:

- **AZDash Integration:** Integrate existing preschool student data from the GOLD online application (hosted by Teaching Strategies GOLD) into the ADE Agency Operation Data Store (ODS) with existing K12 data and expose it via new and existing AZDash Reports.
- **Profiles:** Collect characteristics for preschool providers, teachers and students to support analysis of Early Childhood Programs effectiveness.
- **Fiscal Monitoring:** ECE will grant monies to sub grantees in good faith that the sub grantee will achieve the goals of the sub grantee's Grant Project Plan. This will be provided by the existing Grants Management System.
- **External Interactions:** Automation of data collection from certain applications and systems external to ADE (i.e. Bureau of Indian Education (BIE), Department of Economic Security (DES), etc.). Also provide the collected pre-school data from GOLD as appropriate to external applications and agencies via a web portal. **Internal Interactions:** Integration with ADE internal applications and services. Integrated data will interact with ADE systems such as the Customer Relationship Management (CRM) system, Content Management System (CMS), Learning Management System (LMS), Grants Management System, Reporting System (AZDash), etc.

Benefits

ECE services will be greatly enhanced by the integration of Preschool information with ADE's K-12 information systems. Customized dashboards will provide summary information of current and historical preschool data from ECE entry through high school and State of Arizona public colleges. This information will enhance the performance of ECE educators and help ADE understand the needs of AZ ECE students resulting in higher quality ECE programs.

The costs associated with researching childhood development from birth through K-12 and college will be reduced by integrating ECE schools, teacher and student data with K-12 and college data.

Project Management

ADE contracted resources will manage the project, utilizing contracted Architects, Analysts and Developers to complete the project deliverables.

Enterprise Architecture

Compliant.

Summary of Proposed Costs

<i>All Figures in Thousands (\$000)</i>						
<i>Cost Description</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>	<i>2020</i>	<i>Total</i>
Development Costs	135,326.9	849,216.6	795,451.0	335,666.0	87,606.5	2,203,267.0
Operational Costs	0.0	0.0	0.0	0.0	0.0	0.0
Total Project Costs	135,326.9	849,216.6	795,451.0	335,666.0	87,606.5	2,203,267.0

Recommendation: Approval with Conditions

1. Should there be any changes in the proposed costs, technology approach, scope of work, or implementation schedule, ADE must amend the PIJ to reflect the changes and submit it to ADOA-ASET and the Information Technology Authorization Committee (ITAC), if required for review and approval prior to further expenditure of funds.
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